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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,716	10/30/2003	Joseph Mead Jensen	H0005025G	1553

7590 10/28/2004

Honeywell International, Inc.
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EXAMINER

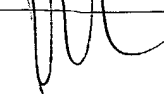
WALBERG, TERESA J

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 10/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/698,716	Applicant(s) JENSEN ET AL. 	
	Examiner Teresa J. Walberg	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26 is/are allowed.
- 6) ☒ Claim(s) 1-11, 13-23, 25 and 27-33 is/are rejected.
- 7) ☒ Claim(s) 12 and 24 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/31/03</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 7-9, 11, 13, 14, 18, 20, 21, 27, 28, 30, 32, and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Linzer et al (4,811,783).

Linzer et al disclose a heat exchanger having the claimed structure including a plurality of tubes (110) carrying a first fluid, the tubes running parallel to each other and being separated by a space there between (see Figs. 1 and 2), at least one layer of thermal buffer members (124) on a first side of the tubes and being separated by a space there between, and a second fluid (106) moving first around the exterior of the buffer members and then the exterior of the plurality of tubes.

With respect to claim 2, Fig. 1 shows a single layer of buffer members (124).

With respect to claims 3 and 4, Fig. 3 shows at least two layers of buffer members (124).

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5, 6, 16, 17, 22, 23, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Linzer et al (4,811,783) in view of Stein et al (3,785,435).

Linzer et al, as discussed above, disclose the claimed structure with the exception of the first fluid being a relatively cool compressor air and the second fluid being an engine hot exhaust gas.

Stein et al disclose a heat exchanger using a first fluid which is a relatively cool compressor air and a second fluid which is an engine hot exhaust gas. See Fig. 1.

It would have been obvious in view of Stein et al to use the heat exchanger of Linzer et al with engine hot exhaust gases and cool compressor air, since Stein teaches that it is desirable to transfer heat between such fluids.

5. Claims 10, 19, 25, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Linzer et al (4,811,783) in view of Hackemesser et al (4,127,389).

Linzer et al, as discussed above, disclose the claimed structure with the exception of spacer support tubes supporting the tube support baffles.

Hackemesser et al disclose spacer support tubes (14b) which support the tube support baffles (44).

It would have been obvious in view of Hackemesser et al to use spacer support tubes supporting the tube support baffles in the heat exchanger of Linzer et al, to better maintain the spacing the tubes.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Linzer et al (4,811,783) in view of Satake et al (4,886,871).

Linzer et al, as discussed above, disclose the claimed structure with the exception of the metal buffer members being made of a nickel/molybdenum/chromium alloy.

Satake et al disclose a nickel/molybdenum/chromium alloy which is resistant to heat and corrosion.

It would have been obvious in view of a Satake et al to use a nickel/molybdenum/chromium alloy for the buffer members in the heat exchanger of Linzer et al, for improved corrosion resistance.

7. Claim 26 is allowed.

8. Claims 12 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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9. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not teach the use of buffer members disposed inside an annular cross section of a plurality of tubes in a heat exchanger.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hackemesser et al (5,653,282), Jones, Gaylord, Takeuchi, and Sanz et al are cited to show heat exchanger structure.

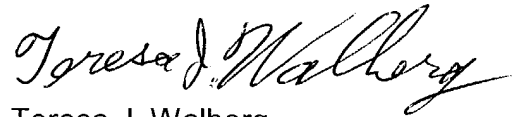
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa J. Walberg whose telephone number is 703-308-1327. The examiner can normally be reached on M-F 9:00 - 5:30.

After November 22, 2004, the examiner's telephone number will be 571-272-4790.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 703-305-5766. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Teresa J. Walberg
Primary Examiner
Art Unit 3742

tjw